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EXAMINER	
LAMBRECHT, CHRISTOPHER M	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/744,771	PAZ ET AL.	
	Examiner	Art Unit	
	Christopher M. Lambrecht	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *42-103* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *42-103* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed March 16, 2006 have been fully considered but they are not persuasive.

Gordon discloses a broadcast stream compressed based on the MPEG standard. Col. 6, ll. 31-34. Gordon further discloses that reducing the visual quality of the stream includes selecting modifiable parameters for compression. Col. 23, ll. 57-67 (describing adaptation of PES bit rates to affect video quality levels). Thus, Gordon teaches selection of modifiable parameters for compression based on the MPEG video compression standard. Moreover, Gordon discloses that MPEG video compression is based in part on prediction of future frames a video stream. Col. 1, ll. 33-47 (describing forward predictive coding of video frames); see also ISO/IEC 13818, incorporated by reference in Gordon, col. 1, ll. 20-32). Because the selection of modifiable parameters is based on MPEG compression, and MPEG compression is based on prediction of future frames of the video stream, it follows that the selection is based on a prediction of future frames of the stream. Accordingly, the Examiner submits that Gordon discloses a method for personalizing a broadcast stream, "wherein reducing the visual quality of the video stream further includes selecting modifiable parameters for performing compression on the broadcast stream, and wherein the selection of the modifiable parameters is based at least in part on a prediction of future frames of the broadcast stream[,]" as recited in claim 78.

Dunn discloses various schemes for assigning different compression levels to different elements included in a video display. Col. 2, ll. 52-60, col. 6, ll. 40-50. Elements compressed to the lowest quality are referred to as least important, and typically include at least the static or

unchanging elements in the display. Col. 3, ll. 19-22, col. 4, ll. 25-32, col. 5, ll. 6-9. Elements compressed at the highest quality include unknown elements, such as those having non-uniform (i.e., non-standard) characteristics. Col. 7, ll. 54-66. Thus, Dunn discloses compressing static display elements to a lower quality than other elements of the display. The Examiner submits that static or unchanging elements constitute standard (i.e., familiar) display elements within the meaning of claim 1. Thus, Dunn teaches compressing at least the static elements to a lower quality than, e.g., those that are unknown (col. 8, ll. 8-21). Referring to column 5, lines 1-15 of Dunn, Applicant asserts that the reference teaches the opposite of the claimed invention, because known display elements are compressed to a higher quality than unknown display elements. (Applicant's Remarks, 14.) The cited portion, however, teaches that the more interesting display elements are compressed to a higher quality, while less interesting display elements are compressed to a lower quality. This is not the opposite of what Applicant has claimed.

Applicant further asserts that the cited portions of Dunn are not applicable where the standard GUI display elements comprise one of icons and menu bars, as recited in claim 102. The Examiner submits, however, that Gordon discloses display elements including GUI display elements such as icons (e.g., fig.1, item 115), which are standard elements (i.e., static, as opposed to dynamic display elements, e.g., video barker 120, col. 4, ll. 24-35).

As to new claim 103, Gordon discloses that the selection of modifiable compression parameters, i.e., their determination, is based on MPEG compression encoding, which is in turn based on predicting future frames of the broadcast stream, as discussed above. Dunn discloses that the MPEG standard distinguishes I-frames, P-frames, and B-frames (col. 1, ll. 31-34), and that I-frames represent JPEG data (col. 1, ll. 18-21). Thus, distinguishing MPEG and JPEG data

is part of the predictive encoding process used to compress video data according to the MPEG standard. It follows that the prediction of future frames includes distinguishing between MPEG and JPEG data as part of the prediction forming the basis of the parameter selection.

For the reasons discussed above, the Examiner submits that claims 78, 102, and 103 are obvious in view of the cited art. Applicant submits no additional arguments as to the patentability of claims 42-77 and 79-101. Accordingly, the rejections of claims 42-101 are maintained as set forth in the prior Office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims **78-95, 97-98, 100, 102, and 103** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (US 6,754,905) in view of Dunn et al (US 6,356,664).

2. Regarding claim **78,** Gordon teaches a method of personalizing a broadcast stream, comprising: providing a broadcast video stream (See Fig. 4 Video Source 1 410V1 and Col. 10 lines 47-67 and Col. 11 lines 1-62); personalizing the stream at a central distribution station in a manner that reduces a visual quality of said provided video stream, while adding personalized information (See Fig. 7 and Col. 17 lines 33-58, Col. 23 lines 28-67, Col. 24 lines 1-20, Col. 27 lines 12-43 The head end (central distribution station) produces transport stream with video stream (PID1 721) and data (PID5 725). The data includes graphics for creating interactive

program guide. The interactive program guide can be personalized); and transmitting the personalized broadcast stream to the user system using a compressed video transport (See Col. 17 lines 33-58 MPEG is a compressed video transport). Gordon also teaches wherein reducing the visual quality of the video stream further includes selecting modifiable parameters for performing compression on the broadcast stream (See Col. 23 lines 57-67, Col. 24 lines 1-6 Video quality can be modified to optimize bandwidth), and wherein selection of the modifiable parameters is based at least in part on a prediction of future frames of the broadcast stream. (See Col. 1 lines 33-47. Based on the language in the Specification (Page 20 lines 28-31), the claimed limitation is interpreted to be inter-frame coding. Gordon uses MPEG compression, which uses inter-frame coding to reduce video quality). Gordon fails to disclose wherein reducing the visual quality of the video stream includes using different compression parameters for different GUI display elements of the frame within the video stream, and such that standard GUI display elements of the frame are compressed to a lower quality than unknown GUI display elements of the frame. However, Dunn teaches reducing the visual quality of a video stream using different compression parameters for different display elements of a frame within the video stream, and such that unimportant display elements of the frame are compressed to a lower quality than important display elements (See Col. 6 lines 30-52). Dunn teaches where the display elements can be static or moving elements (See Col. 5 lines 1-15). The display elements of Dunn are analogous to "GUI display elements" since GUI display elements are simply static or moving display element, that is the term GUI display in view of the specification does not distinguish a GUI display element from a display element in Dunn (See Specification Page 20). Dunn also teaches where an unknown display is more important than a standard display element (See Col. 4

lines 52-67 The unknown display element comprising an intruder's face is more important than a known background image display element) and where the object is weighted as less important when clarity of the object is immaterial (See Col. 4 lines 5-14). Thus, in view of the teachings of Dunn, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the personalizing the stream step of Gordon wherein reducing the visual quality of the video stream includes using different compression parameters for different GUI display elements of the frame within the video stream, and such that standard GUI display elements of the frame are compressed to a lower quality than unknown GUI display elements of the frame to allocated transmission bandwidth based on the importance of objects displayed in the frame (See Col. 2 lines 43-60). This claim is a method of personalizing which comprises a step of personalizing. In subsequent dependent claims "said personalization" is interpreted to mean either the method of personalizing or the step of personalizing.

3. Regarding claim **79,** Gordon modified with Dunn teaches wherein said quality is reduced to maintain a bandwidth requirement of said stream in said transport (See Gordon Fig. 7 and Col. 23 lines 28-67, Col. 24 lines 1-6 Quality of Video can be reduced to minimum levels to utilize bandwidth, See Dunn Col. 2 lines 43-60).

4. Regarding claim **80,** Gordon modified with Dunn teaches wherein said quality is reduced once for a plurality of personalizations (See Gordon Col. 17 lines 33-58 Col. 23 lines 57-67, Col. 24 lines 1-19 The quality of a video stream may be reduced so advertisements may be inserted for a particular subscriber).

5. Regarding claim **81**, Gordon modified with Dunn teaches wherein personalizing said stream comprises showing data side by side with a reduced version of said stream (See Gordon

Fig. 11A 620 and Col. 32 lines 62-67 and Col. 33 lines 1-7 Video stream is shown on the right side of screen data is shown on the left side).

6. Regarding claim **82,** Gordon modified with Dunn teaches wherein personalizing said stream comprises overlaying data on said stream (See Gordon Col. 8 lines 66-67 and Col. 9 lines 1-17 "merged overlay and video").

7. Regarding claim **83**, Gordon modified with Dunn teaches wherein data is shown as a ticker (See Gordon Fig. 1 155 and Col. 4 lines 24-42 and Col. 17 lines 14 Scrolling Banner is a ticker).

8. Regarding claim **84**, Gordon modified with Dunn teaches wherein personalizing said stream comprises: providing a list of display commands (See Gordon Fig. 6 Col. 20 lines 27-49 Items are selectable and alter what is displayed); generating a compressed video stream from said commands (See Gordon Col. 20 lines 27-49 A preview is a compressed video stream); and combining said comprised video stream and said broadcast stream (See Gordon Col. 20 lines 6-25 Movie trailers (previews) are shown in video barker this is combining video stream with broadcast stream).

9. Regarding claim **85**, Gordon modified with Dunn teaches wherein said generating comprises directly generating transform coefficients from said commands (See Gordon Col. 20 lines 6-25 Displaying a compressed video stream is generating transform coefficients).

10. Regarding claim **86**, Gordon modified with Dunn teaches wherein said personalized information is physically added at a set-top of said user (See Gordon Fig. 3 Step 308 and Col. 8 lines 66-67, Col. 9 lines 1-17 The set-top of user merges (physically adds) information).

11. Regarding claim **87,** Gordon modified with Dunn teaches wherein said personalized information is transmitted as overlay data (See Gordon Col. 17 lines 33-58 and Col. 24 lines 35-53 IEPG which is personalized information is transmitted as overlay data).

12. Regarding claim **88,** Gordon modified with Dunn teaches wherein said personalized information is transmitted as display commands (See Gordon Col. 17 lines 33-58 Col. 9 lines 18-48 The IEPG which is personalized information is transmitted as display commands).

13. Regarding claim **89,** Gordon modified with Dunn teaches wherein said stream is compressed using an MPEG compliant compression scheme (See Gordon Col. 6 lines 33-35 Col. 17 lines 33-58).

14. Regarding claim **90,** Gordon modified with Dunn teaches wherein said MPEG comprises MPEG2 (See Gordon Col. 1 lines 20-32 and Col. 6 lines 51-59).

15. Regarding claim **91,** Gordon modified with Dunn teaches wherein said compressed video transport comprises an MPEG compliant transport (See Gordon Col. 6 lines 33-35 Col. 17 lines 33-58).

16. Regarding claim **92,** Gordon modified with Dunn teaches wherein said MPEG comprises MPEG 2 (See Gordon Col. 1 lines 20-32 and Col. 6 lines 51-59).

17. Regarding claim **93,** Gordon modified with Dunn teaches wherein said central distribution station comprises a cable network head-end (See Gordon Fig. 4 400 and Col. 4 lines 43-53 Col. 54-62).

18. Regarding claim **94,** Gordon modified with Dunn teaches wherein said compressed video transport comprises a cable network transport (See Gordon Col. 6 lines 18-35).

19. Regarding claim **95**, Gordon modified with Dunn teaches wherein personalizing the stream includes duplicating a program that generates the broadcast video stream and transmitting the personalized video stream over a different channel than is used to transmit the broadcast video stream (See Gordon Fig. 4 Col. 10 lines 46-67, Col. 11 lines 1-67, Col. 12 lines 1-67, Col. 13 lines 1-15. Broadcast video streams are transmitted over source channels, personalized video streams are transmitted over Data Pipe).

20. Regarding claim **97**, Gordon modified with Dunn teaches wherein personalizing the video stream includes replacing at least one compressed block of the video stream with different compressed data and without first decompressing the video stream (See Gordon Col. 17 lines 45-58 MPEG streams are spliced together).

21. Regarding claim **98**, Gordon modified with Dunn teaches wherein the modifiable parameters are further selected at least in part based on identified capabilities of a user system (See Col. 23 lines 57-67, Col. 24 lines 1-6, Video quality is modified based on the bandwidth of the system).

22. Regarding claim **100**, Gordon modified with Dunn teaches wherein the compression is performed in such a way as to reduce the scrolling resolution of a display provided with the broadcast stream (See Dunn Col. 3 lines 49-67, Col. 4 lines 1-4 Dunn teaches reducing the resolution of moving objects i.e. objects given a low weight appear blurred. This is the same as doing motion estimation using only whole blocks which the specification describes as reducing scrolling resolution (See Specification Pg 16 lines 25-26)).

23. Regarding claim **102**, Gordon discloses display elements including GUI display elements such as icons (e.g., fig.1, item 115), which are standard elements (i.e., static, as opposed to

dynamic display elements, e.g., video barker 120, col. 4, ll. 24-35). Dunn discloses compressing standard (i.e., static) display elements to a lower quality than unknown (i.e., dynamic) display elements, for the purpose making more efficient use of transmission bandwidth (col. 4, ll. 15-20).

24. Regarding claim **103**, Gordon and Dunn taken together disclose the claimed subject matter. In particular, Gordon discloses that the selection of modifiable compression parameters, i.e., their determination, is based on MPEG compression encoding, which is in turn based on predicting future frames of the broadcast stream, as discussed above. Dunn discloses that the MPEG standard distinguishes I-frames, P-frames, and B-frames (col. 1, ll. 31-34), and that I-frames represent JPEG data (col. 1, ll. 18-21). Thus, distinguishing MPEG and JPEG data is part of the predictive encoding process used to compress video data according to the MPEG standard. It follows that the prediction of future frames includes distinguishing between MPEG and JPEG data as part of the prediction forming the basis of the parameter selection.

25. Claims **78, 96, 101** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hooper (US 5,422,674) in view of Dunn.

26. Regarding claim **78,** Hooper teaches a method of personalizing a broadcast stream, comprising: providing a broadcast video stream (See Col. 6 lines 42-57 Authoring Station creates a background image from a video); personalizing the stream at a central distribution station in a manner that reduces a visual quality of said provided video stream, while adding personalized information (See Col. 6 lines 1-14 Overlay images occlude background this is a reduction of quality); and transmitting the personalized broadcast stream to the user using a compressed video transport (See Col. 8 lines 23-33 Personalized video packets are sent to individual settops in an MPEG video stream). Hooper also teaches wherein reducing the visual

quality of the video stream further includes selecting modifiable parameters for performing compression on the broadcast stream and wherein selection of the modifiable parameters is based at least in part on a prediction of future frames of the broadcast stream. (See Col. 6 lines 58-67, Col. 7 lines 1-14. Based on the language in the Specification (Page 20 lines 28-31), the claimed limitation is interpreted to be inter-frame coding. Hooper uses MPEG compression, which uses inter-frame coding to reduce video quality). Hooper fails to disclose wherein reducing the visual quality of the video stream includes using different compression parameters for different GUI display elements of the frame within the video stream, and such that standard GUI display elements of the frame are compressed to a lower quality than unknown GUI display elements of the frame. However, Dunn teaches reducing the visual quality of a video stream using different compression parameters for different display elements of a frame within the video stream, and such that unimportant display elements of the frame are compressed to a lower quality than important display elements (See Col. 6 lines 30-52). Dunn teaches where the display elements can be static or moving elements (See Col. 5 lines 1-15). The display elements of Dunn are analogous to "GUI display elements" since GUI display elements are simply static or moving display element, that is the term GUI display in view of the specification does not distinguish a GUI display element from a display element in Dunn (See Specification Page 20). Dunn also teaches where an unknown display is more important than a standard display element (See Col. 4 lines 52-67 The unknown display element comprising an intruder's face is more important than a known background image display element) and where the object is weighted as less important when clarity of the object is immaterial (See Col. 4 lines 5-14). Thus, in view of the teachings of Dunn, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to modify the personalizing the stream step of Gordon wherein reducing the visual quality of the video stream includes using different compression parameters for different GUI display elements of the frame within the video stream, and such that standard GUI display elements of the frame are compressed to a lower quality than unknown GUI display elements of the frame to allocated transmission bandwidth based on the importance of objects displayed in the frame (See Col. 2 lines 43-60). This claim is a method of personalizing which comprises a step of personalizing. In subsequent dependent claims "said personalization" is interpreted to mean either the method of personalizing or the step of personalizing.

27. Regarding claim **96,** Hooper modified with Dunn teaches wherein personalizing the stream includes generating a plurality of different P frames which refer to a same I frame and a same spatial portion of a display, wherein the method further includes utilizing only some of the P frames, which are relevant for each particular user (See Hooper Col. 6 lines 42-67, Col. 7 lines 1-31, Col. 8 lines 23-45 Hardware IDs determine which sets of P-frames go to each user).

28. Regarding claim **101,** Hooper modified with Dunn teaches overlaying items on a bitmap image (See Hooper Col. 46-59). The examiner takes Official Notice that imaging-editing software, such as Paint, exists that allows users to overlay items on top of a bitmap background and to move items to different parts of the background. Since blocks are much smaller than overlay objects, objects are going to straddle many block boundaries. Thus, moving an object by more than a small amount of pixels is going to change which block boundaries it straddles. Thus, if Hooper used imaging-editing software such as paint, Hooper would meet the limitations of the claim. It would have been obvious to one of ordinary skill in the art to modify Hooper to use such image-editing software, since such image editing software is very user friendly.

29. Claims **42-57, 60-66, 71-77** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon in view of Dunn and further in view of Rangan (US 6,154,771).

30. Regarding claim **42,** Gordon modified with Dunn teaches the method further comprising: personalizing the stream by generating overlay data at the central distribution station (See Col. 4 lines 43-65); and overlaying said overlay data at a set-top box of said user (See Col. 8 lines 29-67, Col. 9 lines 1-17). Gordon modified with Dunn fails to explicitly disclose wherein at least some of said overlay data is not a block-replacement overlay. Rangan teaches a method of personalizing a broadcast video stream wherein at least some of said overlay data is not a block-replacement overlay (See Col. 21 lines 26-33 Translucent overlays are not a block replacement overlay since blocks from one image are blended with another and not replaced). Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to further modify Gordon so that at least some of said overlay data is not a block-replacement overlay as taught by Rangan to provide another type of overlay to a user.

31. Regarding claim **43,** Gordon modified with Dunn modified with Rangan teaches wherein said overlay data comprises opaque data that visually replaces underlying information (See Gordon Col. 16 lines 14-18 Overlays have various level of transparency this would include opaque).

32. Regarding claim **44,** Gordon modified with Dunn further modified with Rangan teaches wherein said overlay data comprises transparent data that visually combines underlying information (See Rangan Col. 15 lines 23-35, Col. 21 lines 28-40)

33. Regarding claim **45,** Gordon modified with Dunn further modified with Rangan teaches wherein said transmitting comprises transmitting in a broadcast system, whereby the

personalized transmitted stream reaches a plurality of subscribers (See Rangan Col. 24 lines 18-22).

34. Regarding claim **46,** Gordon modified with Dunn further modified with Rangan teaches wherein a designated user can view said personalized stream (See Rangan Col. 12 lines 38-48 User can be restricted access to content).

35. Regarding claim **47,** Gordon modified with Dunn further modified with Rangan teaches wherein said personalization makes said stream interactive (See Rangan Col. 11 lines 7-25).

36. Regarding claim **48**, Gordon modified with Dunn further modified with Rangan teaches receiving a user input at said central distribution station (See Rangan Col. 11 lines 40-67, Col. 12 lines 1-37 The user clicks on a hotspots and ISP receives input and returns associated URL).

37. Regarding claim **49,** Gordon modified with Dunn further modified with Rangan teaches wherein said input comprises a response to content of a personalized stream (See Rangan Col 11 lines 7-25 Clicking on a hotspot is a response to the personalized stream).

38. Regarding claim **50,** Gordon modified with Dunn further modified with Rangan teaches determining an identification of a user for which to perform said personalization, from said user input (See Rangan Col. 12 lines 38-56 Information is returned based on "unique (network) identities").

39. Regarding claim **51,** Gordon modified with Dunn further modified with Rangan teaches wherein said user input comprises a user login ID (See Rangan Col. 12 lines 38-56 Information is returned based on "unique (network) identities" A unique network identity is a user login ID).

40. Regarding claim **52,** Gordon modified with Dunn further modified with Rangan teaches wherein said video stream is provided as a compressed video stream (See Rangan Col. 11 lines

40-63 Video remains compressed while ISP inserts hotspots. Thus video stream was provided in compressed form).

41. Regarding claim **53,** Gordon modified with Dunn further modified with Rangan teaches wherein said stream is transmitted using a single channel of said transport (See Rangan Col. 22 lines 17-28 SUV receive hypervideo feeds within network bandwidth. The network bandwidth is a single channel of transport).

42. Regarding claim **54**, Gordon modified with Dunn further modified with Rangan teaches wherein said personalizing comprises modifying a visual portion of said stream (See Rangan Col. 15 lines 23-34, Col. 21 lines 28-33, Col. 23 lines 60-67, Col. 24 lines 1-5 Hotspots modify visual portion of original content).

43. Regarding claim **55,** Gordon modified with Dunn further modified with Rangan teaches wherein said personalizing comprises modifying a data section of said transport, for application by a set-top box at said user (See Rangan Col. 15 lines 24-60, Col. 23 lines 20-63, Inserting Hotspots is modifying a data section of transport. Hotspots allow user to alter playback).

44. Regarding claim **56**, Gordon modified with Dunn further modified with Rangan teaches wherein modifying said data section comprises adding display commands for said set-top box to said data section (See Rangan Col. 23 lines 20-25, Col. 25 lines 1-33 The Set Top Box extracts hotspots from transport steam. Clicking on Hotspots (commands) changes how hypervideo is displayed).

45. Regarding claim **57**, Gordon modified with Dunn further modified with Rangan teaches wherein modifying said data section comprises adding a compressed overlay for said set-top box

to overlay to data section (See Rangan Col. 15 lines 50-60 The hotspots are part of a compressed video stream Set top box extracts hotspots and overlays them).

46. Regarding claim **60,** Gordon modified with Dunn further modified with Rangan teaches wherein said compression does not transmit data corresponding to overlay blocks which do not change between frames (See Rangan Col. 6 lines 46-67 and Col. 7 lines 1-35 Rangan teaches where the compression is MPEG compression. MPEG compression uses interframe compression. Interframe compression does not transmitting data corresponding to blocks which do not change between frames).

47. Regarding claim **61**, Gordon modified with Dunn further modified with Rangan teaches wherein modifying said data section comprises adding replacement image blocks for said set-top to use for replacing blocks of said stream to said data section (See Rangan Fig. 6 Col. 23 lines 50-67 Col. 24 lines 1-12 When user clicks on hotspot a web page replaces blocks of stream).

48. Regarding claim **62**, Gordon modified with Dunn further modified with Rangan teaches wherein said personalization comprises adding an output from a computer program (See Rangan Col. 11 lines 7-25, A hyperlink is an output from a computer program).

49. Regarding claim **63**, Gordon modified with Dunn further modified with Rangan teaches wherein said computer program comprises an e-mail program (See Rangan Col. 11 lines 7-25, User can click on hyperlink and a benefit is outputted by email program).

50. Regarding claim **64**, Gordon modified with Dunn further modified with Rangan teaches wherein said computer program comprises an Internet browser (See Rangan Col. 11 lines 7-25 A hyperlink is an output from an internet browser).

51. Regarding claim **65,** Gordon modified with Dunn further modified with Rangan teaches wherein said personalization comprises adding information from an Internet source (See Rangan Col. 11 lines 7-25 A hyperlink is information from an internet source).

52. Regarding claim **66,** Gordon modified with Dunn further modified with Rangan teaches wherein personalizing said stream comprises not modifying an audio section of the stream, such that said audio can used by a plurality of different personalizations of the stream (See Rangan Col.15 lines 23-34 Col. 21 lines 27-33 Overlays only need to be a visual object).

53. Regarding claim **71,** Gordon modified with Dunn further modified with Rangan teaches wherein personalizing said stream comprises enhancing a video display of said stream (See Rangan Col. 15 lines 23-34 Overlaying is enhances video display. See Specification Page 7 lines 30-33)

54. Regarding claim **72,** Gordon modified with Dunn further modified with Rangan teaches wherein said stream is compressed using an MPEG compliant compression scheme (See Rangan Col 20 lines 56-64).

55. Regarding claim **73,** Gordon modified with Dunn further modified with Rangan teaches wherein said MPEG comprises MPEG2 (See Rangan Col. 5 lines 29-55).

56. Regarding claim **74,** Gordon modified with Dunn further modified with Rangan teaches wherein said compressed video transport comprises an MPEG compliant transport (See Rangan Col 20 lines 56-64).

57. Regarding claim **75,** Gordon modified with Dunn further modified with Rangan teaches wherein said MPEG comprises MPEG2 (See Rangan Col. 5 lines 29-55).

58. Regarding claim **76**, Gordon modified with Dunn further modified with Rangan teaches wherein said central distribution station comprises a cable network head-end (See Rangan Col. 24 lines 38-41).

59. Regarding claim **77**, Gordon modified with Dunn further modified with Rangan teaches wherein said compressed video transport comprises a cable network transport (See Rangan Col. 24 lines 38-41).

60. Claim **58** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon in view of Dunn in view of Rangan and further in view of Makur (4,963,030).

61. Regarding claim **58**, Gordon modified with Dunn further modified with Rangan teaches where overlay data is compressed (See Rangan Col. 15 lines 50-60). Gordon modified with Dunn further modified with Rangan fails to disclose where overlay data is compressed using a vector quantization method. However, compressing image data using a vector quantization method is well known in the art as taught by Makur (See Col. 1 lines 5-20). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Gordon so that overlay data was compressed using a vector quantization method as taught by Makur to achieve better compression (See Makur Col. 1 lines 5-20).

62. Claim **59** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon in view of Dunn in view of Rangan and further in view of Lee et al. (US 5,778,098).

63. Regarding claim **59,** Gordon modified with Dunn further modified with Rangan teaches where overlay data is compressed (See Rangan Col. 15 lines 50-60). Gordon modified with Dunn further modified with Rangan fails to disclose where overlay data is compressed using a chain code method. However compressing a graphical feature, such as an overlay, using a chain

code compression method is well known in the art as taught by Lee (See Col. 8 lines 9-20 Col. 30 lines 53-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gordon's overlay so that it was compressed using a chain code method as taught by Lee to provide an effective way of compressing objects represented by their contours (See Lee Col. 30 lines 53-59, Col. 32 lines 53-63).

64. Claims **67-70** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon in view of Dunn in view of Rangan and further in view of Wolzien (US 5,761,606).

65. Regarding claim **67**, Gordon modified with Dunn further modified with Rangan teaches personalizing the stream by generating overlay data at a central distribution station (See Rangan Fig. 1 Col. 21 lines 27-33, Col. 23 lines 34-67, Col. 24 lines 1-5 ISP is a central distribution station that generates hotspots which are overlay data). Gordon modified with Dunn further modified with Rangan generates overlay data to alert the viewer that additional content can be accessed (See Rangan Col. 10 lines 24-30). Gordon modified with Dunn further modified with Rangan does not disclose modifying an audio section of the stream. However, personalizing a video stream by modifying the audio section of the stream is well known in the art as taught by Wolzien (See Col. 3 lines 24-67 and Col. 4 lines 1-48 Col. 8 lines 8-26). Therefore it would have been obvious to one of ordinary skill in the art at the time was made to modify Rangan so that his hotspot was accompanied with a sound as taught in Wolzien to indicate to the user that additional content is available (See Wolzien Col. 3 lines 5-9).

66. Regarding claim **68**, Gordon modified with Dunn further modified with Rangan further modified with Wolzien teaches wherein said modifying comprises adding feedback for user interactions to said audio (See Rangan Abstract, Sounding an alert).

67. Regarding claim **69**, Gordon modified with Dunn further modified with Rangan further modified with Wolzien teaches wherein said modifying comprises modifying only a single channel of two channels of said audio (See Wolzien Fig. 1 Speaker 26 Col. 8 lines 8-26 Sound is only played on one speaker, thus only one channel is modified).

68. Regarding claim **70,** Gordon modified with Dunn further modified with Rangan further modified with Wolzien teaches wherein said modifying comprises enhancing said audio (See Wolzien Col. 8 lines 8-26 A sound being produced is adding a sound effect which is enhancing audio as disclosed in the specification (Page 43 line 12)).

69. Claim **99** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (US 6,754,905) in view of Dunn et al (US 6,356,664) in view of Gu et al. (US 6,037,988).

70. Regarding claim **99**, Gordon modified with Dunn fails to disclose wherein prior to compression at least one of the GUI display elements is modified in the broadcast stream to make compression faster. However, it is well know in the art to vary the resolution of objects in an image prior to compressing the image which in turn effects the speed of compression (See Gu Col. 9 lines 55-67). In of the teachings of Gu it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Gordon so that prior to compression at least one of the GUI display elements is modified in the broadcast stream to optimize the relative efficiency and accuracy for representing objects.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Lambrecht whose telephone number is (571) 272-7297. The examiner can normally be reached on Mon-Fri, 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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